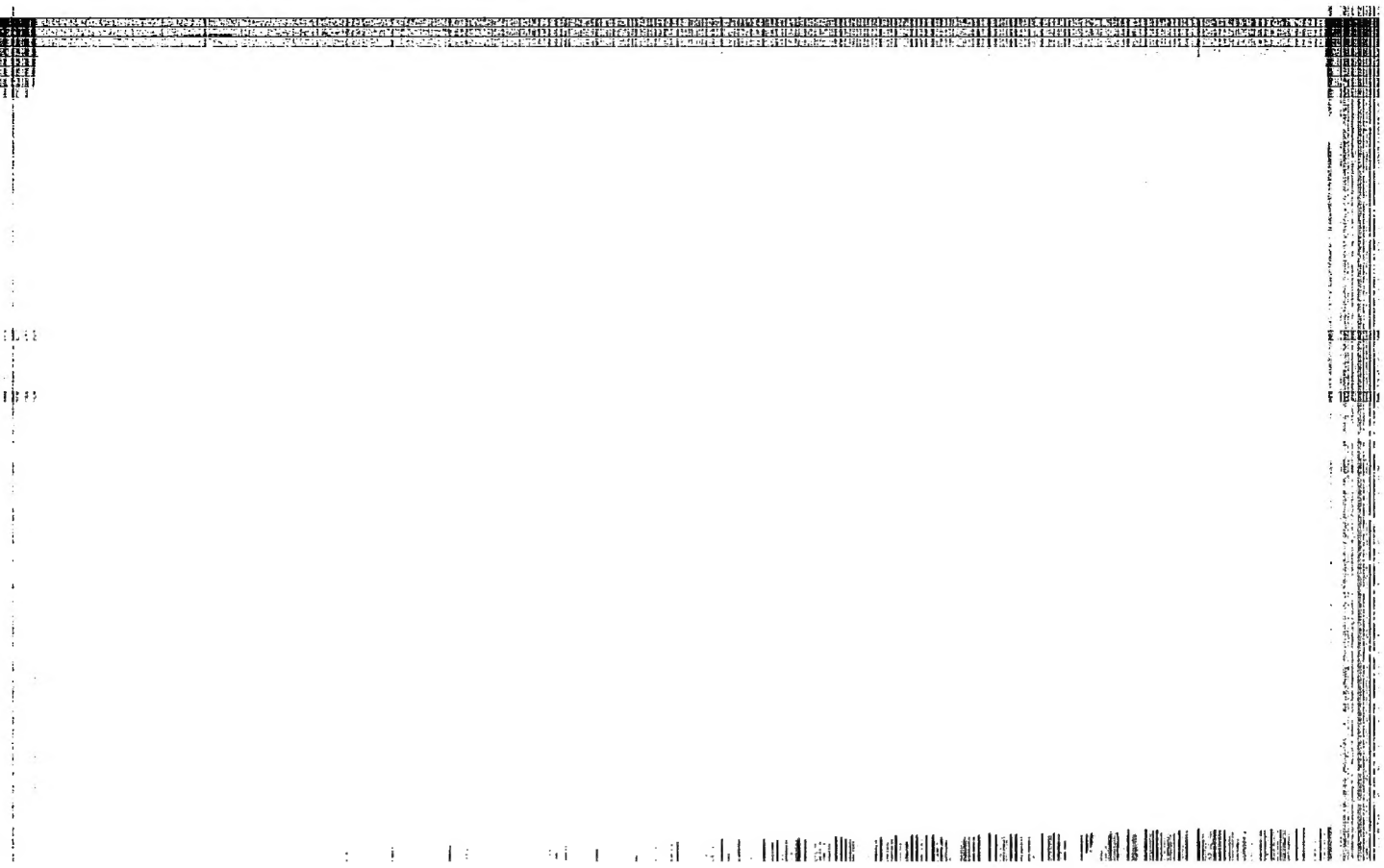
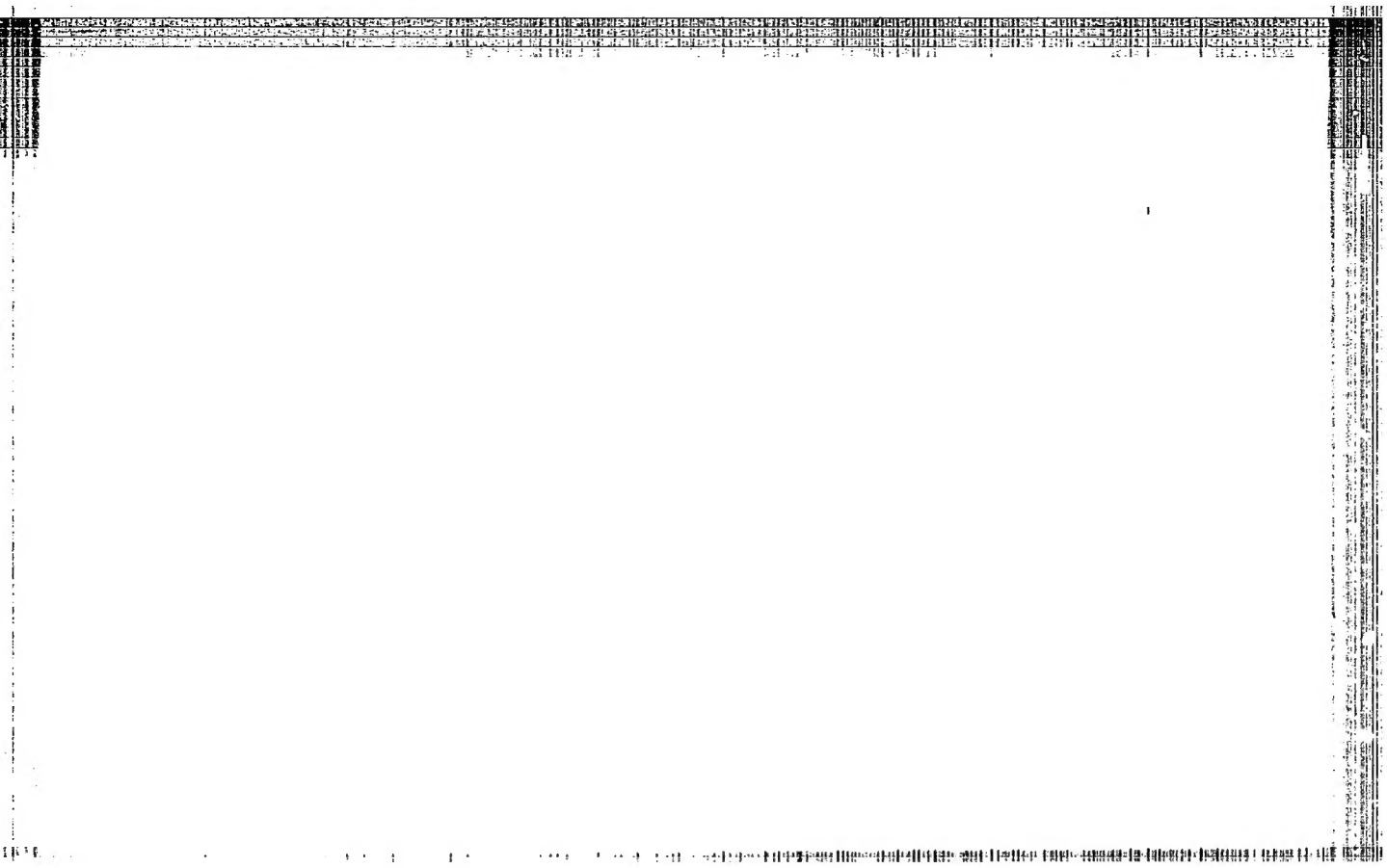
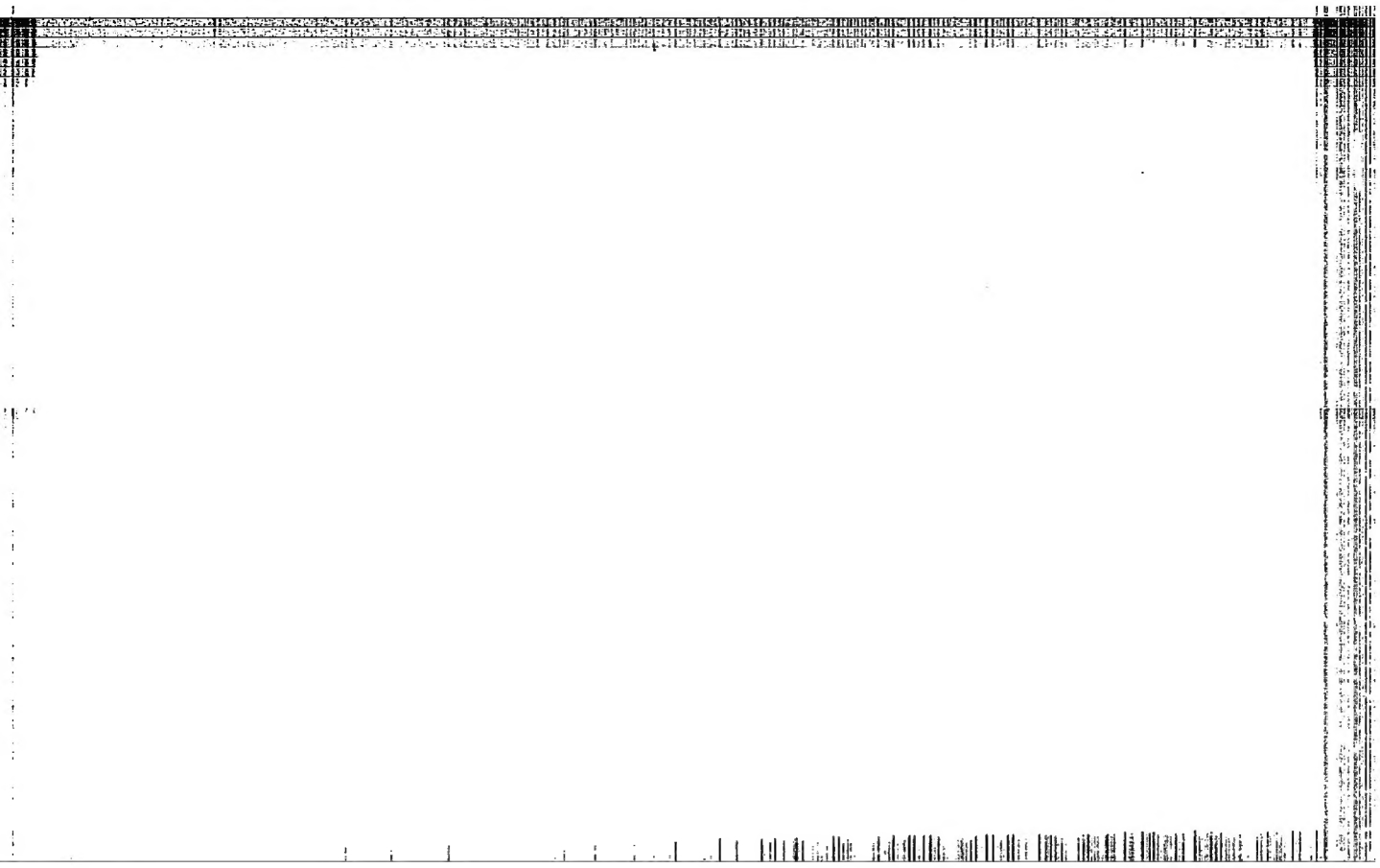


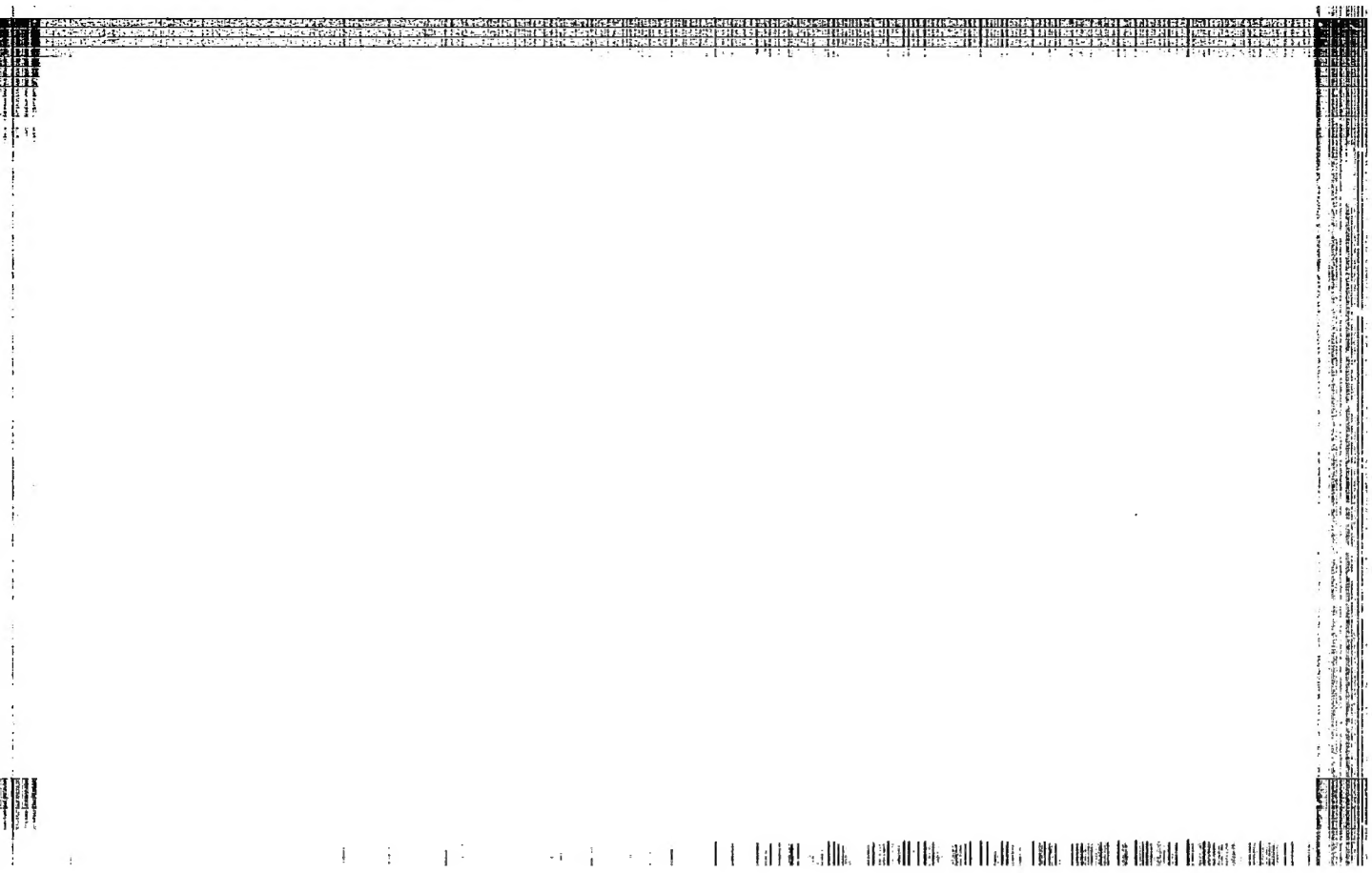
APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R002065120018-6"



APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R002065120018-6"



APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R002065120018-6"



APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R002065120018-6"

ZIL'BERMAN, Ye.N.

Obtaining high-purity monomers for polyamide resins. Khim. prom. no.6:408-416 Je '64. (MIRA 18:7)

ZIL'BERMAN, Ye.N.; KOTLYAR, I.B.; POMERANTSEVA, E.G.; OVCHINNIKOVA, L.M.

Some physicochemical bases of the formation of cyclohexanone oximes by hydroxylamine sulfite. Khim.prom. 41 no.7:488-492 Jl '65. (MIRA 18:8)

ZIL'BERMAN, Ye.N.; STRIZHAKOV, O.D.; SVETOZARSKIY, S.V.; POMERANTSEVA, E.G.

Synthesis of W-aminohydroxamine acids. Zhur. ob. khim. 35 no.5:857-860 My '65. (MIRA 18:6)

ZIL'BERMAN, Ye.N. (Dzerzhinsk); RYBAKOVA, N.A. (Dzerzhinsk)

New catalysts for the Hoesch reaction. Kin. i kat. 5 no.3:538-540 My-Je '64. (MIRA 17:11)

KULIKOVA, A. Ye.; ZIL'BERMAN, Ye.N.; GOLUBEVA, T.K.

Reaction of carboxylic acid amides with nitrous acid and hydroxyl compounds. Zhur. ob. khim. 34 no.12:4080-4084 D '64 (MIRA 18:1)

STRIZHAKOV, O.D.; ZIL'BERMAN, Ye.N.; SVETOZARSKIY, S.V.

Oximes of 2-cyclohexen-1-one. Zhur. ob. khim. 35 no.4:628-632 Ap '65. (MIRA 18:5)

SVETOZARSKIY, S.V.; FELLER, K.L.; SAMITOV, Yu.Yu.; ZIL'BERMAN, Ye.N.; RAZUVAYEV, G.A.

Formation of furan derivatives by autocondensation of cyclohexanone. Izv.AN SSSR. Ser.khim. no.1:121-126 Ja '64. (MIRA 17:4)

ZIL'BERMAN, Ye.N., kand. tekhn. nauk; STRIZHAKOV, O.D.;
SVETOZARSKIY, S.V., kand. khim. nauk

Use of ammonium bisulfite in the production of ε-caprolactam.
Khim. prom. no.4:259-261 Ap '63. (MIRA 16:8)

ZIL'BERMAN, Ye.N.; PYRYALOVA, P.S.

Reduction of aliphatic nitriles under conditions of Stephen reaction. Zhur.ob.khim. 33 no.10:3420-3425 O '63. (MIRA 16:11)

1. Gor'kovskiy politekhnicheskiy institut.

KULIKOVA, A.Ye.; MEYMAN, S.B.; ZIL'BERMAN, Ye.N.

Interaction of aliphatic dinitriles with oleic acid according to Ritter's reaction. Zhur.prikl.khim. 36 no.6:1367-1368 Je '63. (MIRA 16:8)

(Nitriles) (Oleic acid)

RYBAKOVA, N.A.; ZIL'BERMAN, Ye.N.

Synthesis of some new hydroxy ketones by the Hoesch method.
Zhur.ob.khim. 33 no.2:466-469 F '63. (MIRA 16:2)
(Ketones)

IVCHER, T.S.; PEREPLETCHIKOVA, Ye.M.; ZIL'BERMAN, Ye.N.

Polarographic determination of 2-cyclohexen-1-one in cyclohexanone and cyclohexanol. Zhur.anal.khim. 17 no.8:1005-1008 N '62.
(MIRA 15:10)

(Cyclohexenone) (Cyclohexanone) (Cyclohexanol)

ZIL'BERMAN, Ye.N.; KULIKOVA, A.Ye.; TEPLYAKOV, N.M.; RUSHINSKAYA, A.A.

Reactions of mono- and diamines with amide hydrochlorides.
Zhur.ob.khim. 32 no.9:3039-3044 S '62. (MIRA 15:9)
(Amines) (Amides)

PEREPLETCHIKOVA, Ye.M.; ZIL'BERMAN, Ye.N.

Analytical chemistry of ε-caprolactam (survey). Zav.lab. 28 no.10: 1172-1177 '62 (MIRA 15:10)

(Azepinone)

ZIL'BERMAN, Ye.N.

Reactions of nitriles with hydrogen halides and nucleophilic reagents. Usp.khim. 31 no.11:1309-1347 N.'62. (MIRA 15:12)
(Nitriles)
(Hydrogen halides)
(Addition reactions (Chemistry))

ZIL'BERMAN, Ye.N.; LAZARIS, A.Ya.

Reaction of organic thiocyanates with water in the presence of hydrogen chloride. Zhur.ob.khim. 33 no.3:1023-1026 Mr '63. (MIRA 16:3)
(Thiocyanates) (Hydrochloric acid) (Hydration)

SVETOZARSKIY, S.V.; FELLER, K.L.; ZIL'BERMAN, Ye.N.

Tricyclic 1,5-diketone, a new product of the self-condensation of cyclohexanone. Zhur.VKHO 8 no.1:113-114 '63. (MIRA 16:4)
(Ketones) (Cyclohexanone)

LAZARIS, A.Ya.; ZIL'BERMAN, Ye.N.; STRIZHAKOV, O.D.

Products of interaction of haloacetonitriles with hydrohalides and their reactions with nucleophilic reagents. Zhur.ob.khim. 32 no.3:900-905 Mr '62. (MIRA 15:3)
(Acetonitrile) (Hydrogen halides)

ZIL'BERMAN, Ye.N.; KALUGIN, A.A.; PEREPLETCHIKOVA, Ye.M.

Formation of secondary amines in the catalytic hydrogenation of adiponitrile. Zhur.ob.khim. 32 no.3:905-909 Mr '62. (MIRA 15:3)

(Adiponitrile) (Hydrogenation)

ZIL'BERMAN, Ya.N.; IVCHER, T.S.; MEYMAN, S.B.; KULIKOVA, A.Ye.; PEREPLETCHIKOVA, Ye.M.; TEPLYAKOV, N.M.

Formation of 2-cyclohexen-1-one in the dehydrogenation of cyclohexanol. Neftekhimiia 2 no.1:110-114 Ja-F '62. (MIRA 15:5)
(Cyclohexenone) (Cyclohexanol)

ZIL'BERMAN, Ye.N.; RYBAKOVA, N.A.

Catalytic action of zinc chloride in Gesh synthesis.
Zhur.ob.khim. 32 no.2:591-596 F '62. (MIRA 15:2)
(Zinc chloride)
(Catalysis)

ZIL'BERMAN, Ye.N.; LAZARIS, A.Ya.; CHERNYSHOVA, M.A.

Hydration of sulfocyanides in the presence of hydrogen chloride.
Zhur.VKHO 7 no.1:109-110 '62. (MIRA 15:3)
(Thiocyanates) (Hydration) (Hydrochloric acid)

IVCHER, T.S.; PEREPLETCHIKOVA, Ye.M.; ZIL'BERMAN, Ye.N.

Polarographic study of some impurities in cyclohexanone. Zhur.-prikl.khim. 35 no.3:634-637 Mr '62. (MIRA 15:4)
(Cyclohexanone) (Polarography)

ZIL'BERMAN, Ye.N.; KULIKOVA, A.Ye.

Preparation of esters by the acylation of alcohols and phenols by amide hydrochlorides. Zhur.prikl.khim. 35 no.4:869-872 Ap '62. (MIRA 15:4)

(Esters) (Alcohols) (Amides)

ZIL'BERMAN, Ye.N.; LAZARIS, A.Ya.; PETUKHOV, G.G.; STRIZHAKOV, O.D.; GANINA, V.I.

Interaction of nitriles with heavy water and deuterium chloride. Dokl. AN SSSR 142 no.1:96-98 Ja '62. (MIRA 14:12)

1. Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete im. N.I. Lobachevskogo. Predstavleno akademikom B.A. Arbuzovym.

(Nitriles) (Deuterium compounds)

ZIL'BERMAN, Ye.N.; KULIKOVA, A.Ye.

Reactions between amide chlorides and amines. Zhur. VKHO 5 no.1: 107-108 '60. (MIRA 14:4)
(Amide) (Amine)

S/080/62/035/003/016/024
D202/D302

AUTHORS: Ivcher, T. S., Perepletchikova, Ye. M. and Zil'berman, Ye. N.

TITLE: A polarographic investigation of some admixtures in cyclohexanone

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 3, 1962, 634-637

TEXT: The aim of this investigation has been to determine what compounds are formed in pure cyclohexanone during storage. Using polarographic analysis the authors have found that in the absence of oxygen cyclohexanone undergoes an auto-condensation to 2-cyclohexylidene-cyclohexanone, its amount reaching 0.1% after 5 - 7 days storage in an atmosphere of nitrogen; the linear dependence of its concentration on the value of the diffusion current may be used for its quantitative determinations. When stored in air, cyclohexanone at first condenses to 2-cyclohexylidene-cyclohexane, but after a few days some peroxide is formed, which gives definite polarographic curves and can be detected by iodometric titration

as well. The authors propose both analyses for determining oxidation products in cyclohexane, giving as a criterion of its purity the absence on its polarogram of half-waves - 0.96 V (for the peroxide) and that of -1.15 V for cyclohexylidene-cyclohexane. The proposed methods have been checked on artificial mixtures. Full experimental details and results are given. There are 4 figures, 2 tables and 5 references: 3 Soviet-bloc and 2 non-Soviet-bloc. The reference to the English-language publication reads as follows: M. Fields and E. R. Blout, J. Am. Chem. Soc., 70, 930, 1948.

SUBMITTED: May 9, 1961

S/629/60/000/003/006/011
D202/D305

AUTHOR: Zil'berman, Ye. N.

TITLE: The stabilization of halogenated polymers

SOURCE: Vsesouznoye khimicheskoye obshchestvo imeni D. I. Mendeleyeva. Uspekhi khimii i tekhnologii polimerov, sb. 3, Moscow, Goskhimizdat, 1960, 83-106

TEXT: An extensive review of stabilisers used in halogenated polymers industry, based mostly on Western literature. The author, after discussing the properties and the ageing process of these plastics, gives a detailed classification of stabilizers which he defines as substances which may either prevent the splitting off of HCl from the polymer molecules, or react with the already formed HCl, as well as act as anti-oxidants, absorbing the ultraviolet radiation. The stabilizers discussed are used mostly in producing PVC and are divided into the following classes: 1) Inorganic salts of organic acids; metallic salts - soaps, 2) amines, amides, urea, derivatives and heterocyclic nitrogen compounds, 3) epoxy compounds,

Card 1/2

4) aliphatic alcohols, 5) aromatic compounds, 6) unsaturated compounds of the fatty series, 7) polymerization products, 8) organic compounds of tin, 9) other organometallic compounds, 10) chelate compounds. The author cites over 250 examples of stabilizers, discusses their properties and mode of use. There are 112 references: 18 Soviet-bloc and 94 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: M. J. Bost, Ind. plast. mod., 10, 3, 1, (1958); D. E. Winkler, Ind. Eng. Chem., 50, 863, (1958); E. I. Hensch and A. G. Wilbur, Ind. Eng. Chem. 50, 871, (1958); R. M. Brice and W. M. Budde, Ind. Eng. Chem. 50, 868, (1958).

SUKHORUKOV, B.I.; FINKEL'SHTEYN, A.I.; ZIL'BERMAN, Ye.N.; KULIKOV, A.Ye.; GANINA, V.I. (Dzerzhinsk)

Spectroscopic study of the molecular structure of amide hydrochlorides. Zhur. fiz. khim. 35 no.7:1600-1605 Jl '61. (MIRA 14:7)

(Amides—Spectra)

27496
S/062/61/000/009/012/014
B117/B101

155546 2209 1303, 1436

AUTHORS: Freydlin, L. Kh., Sladkova, T. A., Kudryavtsev, G. I., Sheyn, T. I., Zil'berman, Ye. N., and Fedorova, R. G.

TITLE: Catalytic hydrogenation of aromatic nitriles and the properties of polyamides obtained from p-(β,β'-diamino-diethyl) benzene

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 9, 1961, 1713-1715

TEXT: The hydrogenation of p-phenylene diacetondinitrile to give p-(β,β'-diamino-ethyl) benzene: $NC-CH_2-C_6H_4CH_2CN \rightarrow H_2N-C_2H_4-C_6H_4-C_2H_4-NH_2$ and the properties of the polyamides based on this diamine were studied. The p-phenylene diacetodinitrile (m.p. 95°-97°C) was prepared from acetone cyanohydride and p-xylylene dibromide. Hydrogenation was carried out at 100°-105°C and an initial hydrogen pressure of 100 atm in a rotating autoclave of 0.175 liter capacity. Dioxane, methyl alcohol, or ethyl alcohol containing some ammonia were used as mediums. The catalysts were prepared by exhaustively

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Catalytic hydrogenation of ...

leaching powdered 50% nickel-aluminum- and cobalt-aluminum alloys with 10% aqueous NaOH solution. The catalysts were then washed with water up to neutral reaction against phenolphthalein. Cobalt skeleton catalyst leached with 25-30% aqueous alkali solution at maximally 15°C (Ref. 5: see below) was used in some experiments. Diamine yields are strongly influenced by the nature of the catalyst and its preparation method. The yield is 64-65% in the case of nickel skeleton catalyst, 74% with cobalt skeleton catalyst leached at 90°-100°C, and 94% with catalyst prepared by "cold leaching". The authors also studied the polycondensation of p-(β,β'-diamino-diethyl) benzene with adipic acid and terephthalic acid. Addition of acetone to an equimolar mixture of aqueous diamine- and adipic acid solutions precipitates the salt. This salt is crystallized twice from water, yielding a white crystalline substance, m.p. 200°-202°C ($C_{16}H_{26}N_2O_4$). The polyamide was obtained by polycondensation of this salt at 260°-280°C. Polycondensation occurs in the solid phase below the melting point of the polyamide. This polyamide based on p-(β,β'-diamino-diethyl) benzene and adipic acid was also prepared at 20°C by heterophase polycondensation: reaction between the aqueous diamine solution (with sodium carbonate added) and adipic chloride in benzene. Polyamides were

Catalytic hydrogenation of ...

also prepared in an analogous manner by reaction of terephthalic- and sebacic chlorides in methylene chloride with aqueous diamine solutions containing alkali to bind the hydrochloric acid formed, according to the method by P. W. Morgan (Ref. 8, see below). In all experiments, polycondensation of adipic acid with the diamine under investigation yielded a polyamide having a melting point of 314°-320°C. It is soluble in concentrated H_2SO_4, cresol, formic acid, hydrochloric acid, and insoluble in organic solvents. Polyamides of higher mol wt. are obtained by increasing the reaction temperature and reaction time. The relative viscosity of these polyamides in concentrated H_2SO_4 is increased from 1.73 to 2.69. By spinning these high-molecular polyamides from their melts at 335°-340°C fibers capable of orientation at high temperatures were obtained. The polymer properties are also affected by the purity of the amino salt used. If the salt is only recrystallized once, colored polyamides of lower molecular weight are formed. There are 2 tables and 8 references: 3 Soviet and 5 non-Soviet. The four most recent references to English-language publications read as follows: F. C. Lum, E. F. Carleton, Industr. and Engng Chem. 44, 1595 (1952); E. F. Carleton, F. C. Lum,

Card 3/4

Catalytic hydrogenation of ...

27496
S/062/61/000/009/012/014
B117/3101

Industr. and Engng Chem. 49, 1239 (1957); Ref. 5: B. V. Aller, J. Appl. Chem. 7, 130 (1957); Ref. 8: P. W. Morgan, SPE-Journal 15, 485 (1959).

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences USSR); Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna (All-Union Scientific Research Institute of Synthetic Fibers)

SUBMITTED: March 28, 1961

Card 4/4

ZIL'BERMAN, Ye.N.; TVCHER, T.S.; PEREPLETCHIKOVA, Ye.M.

Conductometric investigation of the reaction of some nitriles with hydrogen chloride. Zhur.ob.khim. 31 no.6:2037-2039 Je '61. (MIRA 14:6)

(Nitriles) (Hydrochloric acid) (Conductometric analysis)

ZIL'BERMAN, Ye.N.; TAYKOVA, N.K.; RYBAKOVA, N.A.; FELLER, K.L.

Study of the selective reactivity of one nitrile group in adiponitrile. Zhur.ob.khim. 31 no.6:2040-2045 Je '61. (MIRA 14:6)

(Adiponitrile)

RYBAKOVA, N.A.; ZIL'BERMAN, Ye. N.

Synthesis of $\alpha\omega$-di-(2,4-dihydroxybenzoyl) alkanes and -aralkanes from dinitriles and resorcinol. Zhur. ob. khim. 31 no.4:1272-1275 Ap '61. (MIRA 14:4)

(Ketones) (Nitriles)

ZIL'BERMAN, Ye. N.; LAZARIS, A. Ya.

New reaction of chloroacetonitrile with hydrogen chloride and alcohols. Zhur. ob. khim. 31 no.4:1321-1324 Ap '61.
(MIRA 14:4)

(Acetonitrile)

SVETOZARSKIY, S.V.; ZIL'BERMAN, Ye.N.; FINKEL'SHTEYN, A.I.

Reactions between benzaldehyde and ammonia. Zhur.ob.khim. 31 no.5:1717-1719 My '61. (MIRA 14:5)
(Benzaldehyde) (Ammonia)

26866
S/080/61/034/004/007/012
A057/A129

15-8530 also 2209

AUTHORS: Popova, Z. V.; Yanovskiy, D. M.; Zil'berman, Ye. N.; Rybakova, N.A. Ganina, V. I.

TITLE: Effect of some phenols on thermal and photo-decomposition of polyvinylchloride

PERIODICAL: Zhurnal prikladnoy khimii, v. 34, no. 4, 1961, 874 - 881

TEXT: The correlation between the structure of the compound and the effect on the rate of thermal and photo-decomposition of polyvinylchloride (PVC) for some derivatives of 2-oxysubstituted and non-substituted (in the ortho position benzophenones and acetophenones, alkyl- and alkylene resorcines, as well as some analogous compounds was investigated. It was found that the stabilizing effect is not only due to the absorption ability of ultraviolet light ("filter effect"), but also to the ability to inhibit chain reactions in thermal and photodecomposition of PVC. The "filter effect is better expressed in compounds containing molecules in which an interaction occurs between carbonyl and hydroxyl groups, resulting in formation of a hydrogen bond. The ability for inhibition of decomposition of PVC by chain reactions is prevalent in compounds containing an

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Effect of some phenols on ....

easily mobile hydrogen atom in the hydroxyl group. In prior papers (Ref. 4: Vysokomol. soyed., 2,2,210, 1960; and Ref. 5: Doklady Mosk. Mezhdunarod. Simposiuma po makromol. khim. (Reports of the International Symposium on Macromol. Chem. Moscow), III, 372, 1960) the present authors demonstrated that ultraviolet light-absorbing stabilizers (among these benzophenone derivatives) also diminish thermal decomposition of PVC. The ultraviolet spectra of the substances investigated in the present work were taken with an СФ-4 (SF-4) spectrophotometer. Depending on the absorption ability concentrations from 0.005 to 0.074 g/l of stabilizers were used. PVC samples of the "ПФ-spetsial'naya" (PF-special) resin type with 0.00025 mole stabilizer per 10 g PVC were investigated. The inhibiting effect on thermal decomposition of PVC was estimated comparing the dehydrogenation rate by heating stabilized and non-stabilized PVC (Ref. 16: ZhPKh, 33, 1, 186, 1960). The photostabilizing effect was determined by the decrease in thermal stability and increase in HCl evolution rate of a stabilized and non-stabilized sample after irradiation by a ПРК-2 (PRK-2) ultra-violet bulb (Ref. 16). If v_1 and v_2 are the mean integral HCl evolution rates until and after irradiation (175°C, 180 minutes in air stream) of the non-stabilized PVC sample, and v_3 and v_4 of the stabilized sample, then the ratio v_3/v_1 or v_4/v_2, respectively, characterize the effect of the stabilizer prior to and after irradiation. On the other hand the ratios v_2/v_1 and

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Effect of some phenols on .....

v_4/v_3 characterize the increase in the dehydrochlorination rate for the non-stabilized and stabilized PVC. The stabilizer has a "filter effect" if $v_2/v_1 > v_4/v_3$, while $v_4/v_3 > v_2/v_1$ indicates that the stabilizer is a photosensitizer. The obtained results demonstrate on a table that the strongest inhibitors for the thermal decomposition of PVC are 2, 4, 6- trioxybenzophenone (III), 1,10-di-(2,4-dioxyphenyl)-decane (XIX) and ethylresorcine (XVIII). Less effect is obtained with 2,4-dioxybenzophenone (I), 2-oxy-4 methoxybenzophenone (II), 2,2'-dioxy-4,4'-dimethoxybenzophenone (VI), acetophenone (XVI). No inhibiting effect was obtained with 2,4-dioxy-4'-chlorobenzophenone (IV), 2,4-dioxy-3'-nitrobenzophenone (V), 2,4-dioxyacetophenone (VII), 2,2', 4,4'-tetraoxyderivatives of adipophenone (IX), or pimelophenone (X), of azelaophenone (XI), of sebacophenone (XII), 4-phenylbenzophenone (XV), and benzophenone (XIV). Apparently the inhibiting effect is in relation to the mobility of the hydrogen atom in the hydroxyl group. Thus the compounds XIV, XV, XVI and XVII do not have hydroxyl groups and also no inhibiting effect on thermal decomposition of PVC. In the compounds I, II, IV, V, VII, IX - XII and α,α'-di(2,4-dioxybenzoyl)-p-xylylene (XIII) cyclization is possible by interaction of the hydroxyl group (being in ortho position) with the carbonyl group. Cyclization diminishes the mobility of the hydrogen atom in the hydroxyl group, thus effecting a decrease in the inhibition effect of these compounds.

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Effect of some phenols on .....

Molecules of XVIII and XIX contain a mobile hydrogen atom which does not react with the carbonyl group. This explains the higher inhibiting effect of these compounds in relation to VII and XII. The high effect of III is caused by the two hydroxyl groups being in ortho position to the carbonyl group thus having a weakend cycle. The greatest "filter effect" is shown by diphenyl (XVII), 2,2', 4,4'-tetraoxy-derivatives of adipophenone (IX), of pimelophenone (X), (XI), (XII) and also (V). No effect was shown by (III), (XVI) and (XVIII). Stabilizers with a strong "filter effect" have an intensive light absorption in the range of 2,200 - 3,300 Å. There are 2 tables and 17 references: 8 Soviet-bloc and 9 non-Soviet-bloc.

SUBMITTED: July 9, 1960

Card 4/4

ZIL'BERMAN, Ye.N.; MEYMAN, S.B.; KULIKOVA, A.Ye.

Synthesis of amides of substituted propionic and isobutyric acids.
Zhur.prikl.khim. 33 no.10:2375-2376 O '60. (MIRA 14:5)
(Phopionic acid) (Isobutyric acid)

25074
S/080/60/033/010/028/029
D216/D306

53610

AUTHORS: Zil'berman, Ye.N., Meyman, S.B., and Kulikova, A.Ye.

TITLE: The synthesis of amides of substituted propionic and isobutenic acids

PERIODICAL: Zhurnal prikladnoy khimii, v. 33, no. 10, 1960, 2375 - 2376

TEXT: The present work deals with the high yield preparations of chloro-and oxy-amides of substituted propionic and isobutonic acids namely α, β dichloropropinamide (I) lactamide (II) β-chloropropinamide (III), α-oxyisobutyramide (IV), α-chloroisobutyrchloride(V):

$CH_2RCHR'CONH_2$

I, II, III

$CH_2RCHR'CONH_2$
CH_3

IV, V

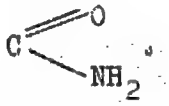
where I: R = R' = Cl, II, IV: R = H, R' = OH; III, V: R = Cl, R' =

Card 1/3

The synthesis of amides ...

= H. The above compounds appear as intermediate products during the synthesis of important industrial monometers - acrylamides, metacrylamides and their chlorides. The authors avoid the formation of chloronitriles by directly reacting acryl and metacryle by the following reactions:

$$CH_2 = CH - CN + 2HCl + H_2O \rightarrow [CH_2ClCH_2-C(NH_2)(OH)]Cl \xrightarrow{H_2O} CH_2ClCH(NH_2)COOH$$



It should be noted that α, β-dichloropropionamide (I) was discharged from the reacting mixture not as the chlorhydrate but as the free amide. A similar reaction was observed in the preparation of trichloroacetamide. The initial materials for the synthesis were freshly distilled acrylonitrile, metacrylonitrile and acetocyanhy-

Card 2/3

The synthesis of amides ...

drin whose constants corresponded to the literature values. α, β-dichloropropionitrile synthetized by chlorination of acrylonitrile in the presence of pyridine has a n_D^{20} 1.4638, lactic acid nitrile, obtained by reacting acetaldehyde with prussic acid has a $n_D^{18.4}$ 1.4048. The hydration of nitriles was carried out in the medium of absolute sulphuric ether at 5-0°C, with stirring. α, β-dichloropropionamide (I) was synthetized from a solution containing 6.2 gms. (0.05 mole) α, β- dichloropropionitrile and 0.9 gm. (0.05 moles) of water in 20 mls. of ether into which 8 gm. of hydrogen chloride was introduced. The resulting precipitate was washed with ether and dried in a vacuum dessicator. 6.6 gm. of product was obtained, (93 % of theoretical), with a melting point was 103°. β chloropropionamide (III) was prepared from the mixture of 10.6 gm. (0.2 moles) of acrylonitrile, 3.6 gm. (0.2 mole) water and 40 mls. of ether containing 36 gms. of HCl. After 19-20 hours 26.5 gm (93 %) of the amide hydrochloride (III) was filtered off dissolved

Card 3/5

The synthesis of amides ...

in 50 mls. of water, neutralized with sodium carbonate using methyl orange, and then evaporated. From the residue 12.5 gm. (76 %) of product (III) was extracted with acetone with melting point 101°C. (recrystallized from ethylacetate). On mixing the test compound with manufactured (III) no depression of melting point was observed. Under analogous conditions interaction of metacrylonitrile, HCl and water did not produce a precipitate. The concentrated reaction mixture treated as described above gave 82 % of (V) with a melting point of 104°C (recrystallized from ethylacetate and % ether). α-oxy-isobutramide (IV) was prepared from 40 mls. of ether 3.6 gms. (0.2 moles) of water and 18 gms. of HCl (0.5 moles); 17 gm. (0.2 mole) of acetoncyanhydrine was added dropwise over 20 min. 27 gm. of the hydrochloride was obtained (7 %), melting point 85°C (with decomposition). The salt was unstable in air but could be stored in a dessicator. On hydrolysis of 15 gm. of salt as described for the previous compound, 9.5 gm. (86 % on initial) of product (IV) was obtained, melting point 94°C. (recrystallized from ethylacetate). Lactamide was synthetized from 1.8 gm. (0.1 mole) of wa-

Card 4/5

The synthesis of amides ...

ter, 40 mls. of ether and 7.2 gm. (0.2 moles) of HCl and dropwise additions over 10 min. of 8.9 gm. (0.1 mole) of lactonitrile. Left overnight the thick mass formed was treated with 25 mls. of water and neutralized with sodium carbonate using methyl orange. From the residue after concentration ethyl acetate extracted 6.6 gm. (74 %) of dl amide (II), melting point 75-77 ° (from methyl acetate). There are 8 references: 5 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: C.L. Stevens, J. Am. Chem. Soc., 70, 165, 1948; Ch.C. Price, J. Zomlefer, J. Org. Chem. 14, 210, 1949; H.R. Snyder, C.T.Elston, J. Am. Chem. Soc., 76, 3039, 1954.

SUBMITTED: February 24, 1960

Card 5/5

ZIL'BERMAN, Ye.N.; SLADKOV, A.M.

Interaction between nitriles, tertiary alcohols, and hydrogen chloride. Zhur. ob. khim. 31 no.1:245-249 Ja '61. (MIRA 14:1)
(Nitriles) (Alcohols) (Hydrochloric acid)

ZIL'BERMAN, Ye.N.; LAZARIS, A.Ya.

Mechanism of the reaction of substituted benzonitriles with hydrogen chloride and certain nucleophilic reagents. Zhur. ob. khim. 31 no.3:980-984 Mr '61. (MIRA 14:3)
(Benzonitrile)

ZIL'BERMAN, Ye.N.; KULIKOVA, A.Ye.

Reactions of aliphatic dinitriles with glycols and hydrogen chloride. Zhur. ob. khim. 30 no.12:3999-4002 D '60. (MIRA 13:12)
(Nitriles) (Glycols) (Hydrochloric acid)

Vol'kenshteyn, Ye. N.

SOV/4982

International symposium on macromolecular chemistry, Moscow, 1960.

Mezhdunarodnyy simpozium po makromolekulyarnoy khimii SSSR, Moskva, 14-18 iyunya 1960 g.; doklady i avtoreferaty. Sektsiya I. (International Symposium on Macromolecular Chemistry Held in Moscow, June 14-18, 1960; Papers and Summaries. Section I.) [Moscow, Izd-vo AN SSSR, 1960] 346 p. 5,500 copies printed.

Sponsoring Agency: The International Union of Pure and Applied Chemistry, Commission on Macromolecular Chemistry

Tech. Ed.: T. V. Polyakova.

PURPOSE: This collection of articles is intended for chemists and researchers interested in macromolecular chemistry.

COVERAGE: This is Section I of a multivolume work containing scientific papers on macromolecular chemistry in Moscow. The material includes data on the synthesis and properties of polymers, and on the processes of polymerization, copolymerization, polycondensation, and polyrecombination. Each text is presented in full or summarized in French, English, and Russian. There are 47 papers, 28 of which were presented by Soviet, Rumanian, Hungarian, and Czechoslovakian scientists. No personalities are mentioned. References accompany individual articles.

Card 6/9

49

S/075/60/015/006/015/018
B020/B066

AUTHORS: Kalugin, A. A., Perepletchikova, Ye. M., Zil'berman, Ye. N., Vodzinskiy, Yu. V., and Kulikova, A. Ye.

TITLE: Quantitative Determination of Impurities in Adiponitrile

PERIODICAL: Zhurnal analiticheskoy khimii, 1960, Vol. 15, No. 6, pp. 739-741

TEXT: In the preceding publication of this series (Ref. 1) it was shown that the main impurities in adiponitrile are 1-imino-2-cyano-cyclopentane or 1-amino-2-cyano-cyclopentene-1,2 (I), 2-cyano-cyclopentanone-1 (II), and cyclopentanone (III). The authors devised a method for the quantitative determination of impurities in adiponitrile, and determined (I) by the acidimetric method, and (II) and (III) polarographically. The cyanimine (I) is not reduced on the dropping mercury electrode. Its easily hydrolyzable imino group is hydrolyzed with weak hydrochloric acid, and the cyanimine (I) content in adiponitrile is determined by titration of the excess hydrochloric acid. The active hydrogen in the cyano ketone (II), which is readily enolized, was determined by the Chugayev-Tserevitinov

Card 1/3

method. The nitrile group in (II) is conjugated by a double bond. It is known that such compounds are easily reduced on the dropping mercury electrode. 2-cyano-cyclopentanone (II) is reduced at $E_{1/2}$ = - 2.0 v relative to a saturated calomel electrode. Cyclopentanone (III) is reduced like other ketones at a highly negative potential $E_{1/2}$ = - 2.6 v, which renders its determination very difficult. At high cyclopentanone concentrations, a maximum appears in the polarographed (about 0.06%) solution, which could not be eliminated. The half-wave potentials of (II) and (III) considerably differ from each other (Fig. 1). This permits a simultaneous quantitative determination of the cyano ketone (II) and the cyclopentanone (III). The electroreduction of 2-cyano-cyclopentanone-1 (II) and of cyclopentanone was studied on an M-8 (M-8) polarograph of the Gor'kovskiy universitet (Gor'kiy University). It may be seen from the constant ratio I_d/C (Table 1) that the height of waves for II and III is proportional to the concentration. Determination takes only 40 minutes. The content of II and III is determined by means of calibration curves which had been previously plotted (Fig. 2). To check the method, a number of artificial mixtures were analyzed (Table 2). The method devised was used in the

Quantitative Determination of Impurities in Adiponitrile

S/075/60/015/006/015/018
B020/B066

analysis of adiponitrile samples purified by different processes. There are 2 figures, 2 tables, and 4 references: 2 Soviet and 2 US.

SUBMITTED: November 21, 1959

Card 3/3

ZIL'BERMAN, Ye.N.

Stabilization of halogen-containing polymers. Usp. khim. i tekh. polim. no.3:83-106 '60. (MIRA 13:9)
(Polymers) (Condensation products)

5.3610 also 2209

S/079/60/030/006/030/033/XX
B001/B055

AUTHORS: Svetozarskiy, S. V., Razuvayev, G. A., Zil'berman, Ye.N., and Volkov, G. S.

TITLE: Reactions in Spontaneous Condensation of Cyclic Ketones and Their Condensation With Ammonia

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 6, pp. 2042 - 2047

X

TEXT: Basing on Refs. 1-6, the authors show in the present investigation that, by spontaneous condensation of cyclopentanone under known conditions, one obtains the ketones (the bicyclic ketone 2-cyclopentylidene cyclopentanone and tricyclic ketone 2,5-dicyclopentylidene cyclopentanone) described in Refs. 7,8. In this case, the initially formed dihydroxy ketone is evidently unstable and readily splits off two molecules of water giving the unsaturated ketone (Scheme). By spontaneous condensation of 4- and 3-methyl cyclohexanone under ordinary conditions, tricyclic products were obtained (2-[2-(1-hydroxy-4-methyl-cyclohexyl)-1-hydroxy-4-methyl-cyclohexyl]-4-methyl cyclohexanone (I)

Reactions in Spontaneous Condensation of Cyclic Ketones and Their Condensation With Ammonia

S/079/60/030/006/030/033/XX
B001/B055

and 2-[2-(1-hydroxy-5-methyl-cyclohexyl)-1-hydroxy-5-methyl-cyclohexyl]-5-methyl cyclohexanone (II)). By splitting off two molecules of water from these dihydroxy ketones, the α,β-δ,ε-unsaturated ketones (III) and (IV) were formed. At elevated temperatures, compounds (III) and (IV) form one and the same hydrocarbon, 2,6,10-trimethyl-1,2,3,4,5,6,7,8,9,10,11,12-dodecahydro triphenylene (V). Condensation of 4- and 3-methyl cyclohexanones with ammonia in the presence of calcium and ammonium chlorides gave substituted 2,3,4,5-tetrahydro-pyrimidines, compounds (VI) and (VII). The following β-amino ketones could be isolated from the hydrolysis products of the latter two substances: 2-(4'-methyl-1'-amino-cyclohexyl)-4-methyl cyclohexanone (VIII) and 2-(3'-methyl-1'-amino-cyclohexyl)-5-methyl cyclohexanone (IX). Thus, it is seen that cyclopentanone, cycloheptanone, cyclohexanone and its monomethyl-substituted isomers behave differently in spontaneous condensation and ordinary condensation with ammonia. The most reactive of the ketones listed are cyclohexanone and 4-methyl cyclohexanone. There are 8 references: 3 Soviet, 3 German, and 2 US.

SUBMITTED: June 23, 1959

Card 2/2

ZIL'BERMAN, Ye.N.; TAYKOVA, N.K.

Reactivity of nitriles of dibasic aliphatic acids. Zhur.ob.khim. 30 no.8:2506-2510 Ag '60. (MIRA 13:8)
(Nitriles)

ZIL'BERMAN, Ye. N.

Certain reactions of nitriles leading to the formation of a new nitrogen-to-carbon bond. Usp. khim. 29 no.6:709-735 Je '60. (MIRA 13:6)

(Nitriles) (Chemical bonds)

KULIKOVA, A.Ye.; ZIL'BERMAN, Ye.N.; SAZANOVA, N.A.

Synthesis of amides and their hydrochlorides from nitriles.
Zhur.ob.khim. 30 no.7:2180-2183 Jl '60.
(MIRA 13:7)

(Amides) (Nitriles)

ZIL'BERMAN, YE. N.

82084
S/190/60/002/01/16/021
B004/B061

5.3852

AUTHORS: Zil'berman, Ye. N., Teplyakov, N. M.

TITLE: Synthesis of Polyesters From Dinitriles and Glycols via Polyiminoester Hydrochlorides

PERIODICAL: Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 1, pp. 133-135

TEXT: The authors previously reported (Refs. 1,2) that the reaction of dinitriles with HCl leads to the formation of the dichlorides of diimmoniumchlorides, which, with equivalent quantities of glycols, form polyiminoester hydrochlorides which give polyesters on hydrolysis. This reaction has not yet been used for producing polymers, and is different from other methods in that it occurs at low temperatures. In this way, polyesters were produced here from dinitriles of adipic-, azelaic-, sebacic-, and p-phenylene diacetic acid with ethylene glycol, butane diol-1,4, and diethylene glycol. The reaction took place at 0°C in ether, dioxane, diisopropyl ether, or β,β'-dichlorodiethyl ether. The

Card 1/2

ZIL'BERMAN, Ye.N.; RYBAKOVA, M.A.

Hoesch synthesis. Synthesis of benzoresorcinol. Zhur.ob. khim. 30 no.6:1992-1996 Je '60. (MIRA 13:6)
(Resorcinol)

SVETOZARSKIY, S.V.; RAZUVAYEV, G.A.; ZIL'BERMAN, Ye.N.; VOLKOV, G.S.

Autocondensation reactions of cyclic ketones, and condensation with ammonia. Zhur.ob.khim. 30 no.6:2042-2047 Je '60. (MIRA 13:6)
(Ketones) (Ammonia) (Condensation products)

ZIL'BERMAN, Ye.N.; TEPLYAKOV, N.M.

Synthesis of polyesters from dinitriles and glycols via polyiminoester hydrochlorides. Vysokom.soed. 2 no.1:133-135 Ja '60. (MIRA 13:5)

(Esters)

S/074/60/029/06/01/005
B022/B003

AUTHOR: Zil'berman, Ye. N.

TITLE: Some Nitrile Reactions Leading to the Formation of a New Nitrogen - Carbon Bond

PERIODICAL: Uspekhi khimii, 1960, Vol. 29, No. 6, pp. 709-735

TEXT: The negative charge of the molecule in nitriles is shifted toward the nitrogen atom due to the high electronegativity of the nitrogen atom as compared to the carbon atom. At the same time, the presence of a σ-bond and two π-bonds is characteristic of the electron structure of the triple bond in the nitrile group. Mention is made in publications of reactions of nitriles with clearly nucleophilic reagents; also the synthesis of secondary amines from nitriles and carboxylic acids is frequently described. The survey of publications given in the present paper contains the following chapters: 1) N-substituted nitrile salts, 2) preparation of bis-amides by reactions of nitriles with aldehydes, 3) synthesis of N-substituted amides by the Ritter reaction, 4) other

Card 1/2

Some Nitrile Reactions Leading to the Formation of a New Nitrogen - Carbon Bond

S/074/60/029/06/01/005
B022/B003

syntheses of N-substituted amides, 5) preparation of heterocyclic compounds under the conditions of the Ritter reaction, 6) preparation of 1,3,5-triazines, 7) other syntheses of heterocyclic compounds, and 8) reactions of nitriles with carboxylic acids. Mention is made of N. K. Kochetkov and collaborators (Ref. 91). The best-known methods hitherto published, as well as reactions and patent rolls concerning the respective processes are listed in the survey. There are 210 references: 11 Soviet, 123 English, 45 German, 14 French, 2 Japanese, 1 Italian, and 1 Yugoslav.

Card 2/2

BOBINOVA, L.M.; YELIZAROVA, P.D.; KRYMOVA, A.I.; ZIL'BERMAN, Ye.N.

Effect of electrolytes and certain organic substances on the emulsion polymerization of vinyl chloride. Plast. massy. no.9: 5-7 '65. (MIRA 18:9)

ZIL'BERMAN, Ye.N.; MICHURIN, A.A.

Reactions of carbamylalkylsulfuric acids with aromatic amines. Zhur. org. khim. 1 no.4:707-711 Ap '65.

Reactions with amines and the pyrolysis of β-carbamylalkylsulfuric acids. Ibid.:711-714 (MIRA 18:11)

1. Gor'kovskiy politekhnicheskiy institut.

ZIL'BERMAN, Ye.N.; PYRYALOVA, P.S.

Cyclization of succinic and glutaric acid dinitriles in the presence of hydrogen chloride. Zhur. org. khim. 1 no.6:983-987 Je '65. (MIRA 18:7)

1. Gor'kovskiy politekhnicheskiy institut.

L 11521-66 EWT(m)/EWP(j)/T/EWA(c) RPL WW/RM

ACC NR: AP6001871 SOURCE CODE: UR/0190/65/007/012/2150/2155

AUTHORS: Zil'berman, Ye. N.; Pyryalova, P. S.; Pomerantseva, E. G.

ORG: Gor'kiy Polytechnic Institute im. A. A. Zhdanov (Gor'kovskiy politekhnicheskiy institut)

TITLE: Polymerization of malononitrile in presence of hydrogen chloride

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 12, 1965, 2150-2155

TOPIC TAGS: polymer, polymerization polycondensation, hydrogen chloride, malonic ester, ether, benzene

ABSTRACT: The low temperature (0--20C) polymerization of malononitrile in presence of HCl was studied. The study is an extension of a previously reported work by Ye. N. Zil'berman and P. S. Pyryalova (Zh. organich. khimii, 1, 983, 1965). The reaction was carried out at 0C and room temperature by passing HCl gas through an ether or benzene solution of malononitrile. The reaction proceeded with a quantitative elimination of NH_4Cl and yielded a mixture of two different polymers. Heating of the resultant polycondensates led to further polycondensation accompanied by further elimination of NH_4Cl and formation of conjugated bonds, as evidenced by EPR spectroscopy. The structure of the polymers was studied by IR and UV spectroscopy. The intrinsic viscosities of the polymers were determined. The experimental results are presented in graphs and tables (see Fig. 1).

Card 1/2

UDC: 66.095.26+678.745

L 11521-66

ACC NR: AP6001871

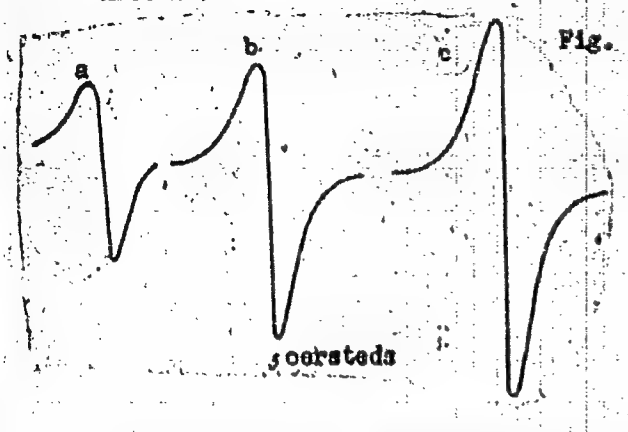


Fig. 1. EPR spectra recorded at equal amplification:
a - polymer heated to 250C (original melting point 94--97C insoluble in benzene) 2 x 10^{17} spins/g (dark-brown);
b - polymer heated to 350C (original melting point 248--250C insoluble in common organic solvents) 2.7 x 10^{18} spins/g (black);
c - polymer (b) heated to 450C; 3.4 x 10^{18} spins/g (black).

It is suggested that the polycondensation proceeds via trimerization of the malononitrile and formation of substituted diaminopyridines and aminiopyridines, which subsequently undergo polycondensation. Orig. art. has: 1 table, 1 graph, and 4 equations.

SUB CODE: 07,11/ SUBM DATE: 30Jan65/ ORIG REF: 006/ OTH REF: 004

Card 2/2

L 26689-66 EWT(m)/EWP(j) JW/RM

ACC NR: AP6016902 SOURCE CODE: UR/0020/65/163/006/1401/1403

AUTHOR: Moshkina, T. N.; Pudovik, A. N. (Corresponding member AN SSSR); Zil'berman, L. V.

ORG: Kazan' State University im. V. I. Ul'yanov-Lenin (Kazanskiy gosudarstvennyy universitet)

TITLE: Phosphorus-containing hydrazo- and azo-compounds

SOURCE: AN SSSR. Doklady, v. 163, no. 6, 1965, 1401-1403

TOPIC TAGS: organic phosphorus compound, ester, hydrazine, hydrazine derivative

ABSTRACT: The authors synthesized esters of azodiphosphoric acid and studied their capacity for addition reactions. In synthesizing esters of azodiphosphoric acid containing aliphatic radicals in ester groups, the authors used the method of oxidixing esters of hydrazodiphosphoric acid. The tetraalkyl esters of hydrazodiphosphoric acid were obtained by a reaction of dialkylphosphoric acid chlorides with hydrazine

$$(RO)_2\overset{O}{\overset{\|}{P}}Cl + NH_2NH_2 + (RO)_2\overset{O}{\overset{\|}{P}}Cl \rightarrow (RO)_2\overset{O}{\overset{\downarrow}{P}}NHNH\overset{O}{\overset{\downarrow}{P}}(OR)_2 ,$$

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L 26689-66

ACC NR: AP6016902

where R = C_2H_5, n-C_4H_9, n-C_6H_{13}, n-C_8H_{17}. Reactions of diethyldibutylchlorophosphates with hydrazine were carried out in ether solution at 25 - 30°, and with dihexyl- and dictylchlorophosphates -- at 40 - 45°. Symmetrical hydrazodiphosphoric esters were isolated from the reaction mixture and purified by fractional precipitation from benzene solutions with hexane or with petroleum ether. Precipitation was repeated several times. The yield of tetraalkyl esters of hydrazodiphosphoric acid was 60 - 80%. It was found that tetraalkyl esters of azodiphosphoric acid are electrophilic compounds capable of facile and quantitative addition of nucleophilic reagents. Orig. art. has: 1 table. [JPRS]

SUB CODE: 07 / SUBM DATE: 06Mar65 / ORIG REF: 003 / OTH REF: 003

Card 2/2 BLG

ZILBERMAN, Ya. S.

Ya. S. Zilberman, "The Application of the Theory of the Higher Accelerations to the Kinematic Analysis of Planar Mechanisms."

paper presented at the 2nd All-Union Conf. on Fundamental Problems in the Theory of Machines and Mechanisms, Moscow, USSR, 24-28 March 1958.

ZIL'BERMAN, Z.I.

Clinical testing of feneksol, an anticholesterinemic preparation. Vrach. delo no.9:141 S '63. (MIRA 16:10)

1. Klinika fakul'tetskoy terapii (zav. - prof. N.B.Shchupak) Chernovitskogo meditsinskogo instituta i 2-ye terapevticheskoye otdeleniye Chernovitskoy oblastnoy bol'nitsy.
(CHOLESTEROL) (ACETIC ACID)

ZIL'BERMAN, Z.I.

Experience in treating peptic ulcer of the stomach and duodenum with small doses of bromine. Terap.arkh. 31 no.8:61-63 Ag '59.
(MIRA 12:11)

1. Iz kliniki fakul'tetskoy terapii (zav. - prof. N.B. Shchupak) Chernovitskogo meditsinskogo instituta i vtorogo terapevticheskogo otdeleniya oblastnoy klinicheskoy bol'nitsy.
(BROMIDES therapy)
(PEPTIC ULCER therapy)

ZIL'BERMAN, Z.I.; KRYLOVA, Z.P.

Two cases of remission in acute leucosis (hemocytoblastosis) treated with cortisone. Vrach.delo no.2:197-199 F '60.
(MIRA 13:6)

1. Klinika fakul'tetskoy terapii (zav. - prof. N.B. Shchupak) Chernovitskogo meditsinskogo instituta i Vtoroye terapevticheskoye otdeleniye oblastnoy klinicheskoy bol'nitsy.
(LEUKEMIA) (CORTISONE)

ZIL'BERMAN, Z.I. (Chernovtsy)

Rational use of antibiotics in the treatment of chronic cholecystitis and angiocholitis. Vrach. delo no.11:132-133 N '61.
(MIRA 14:11)

1. Klinika fakul'tetskoy terapii (zav. - prof. N.B.Shchupak) meditsinskogo instituta i vtoroye terapevticheskoye otdeleniye oblastnoy klinicheskoy bol'nitsy.
(GALL BLADDER—DISEASES) (BILE DUCTS—DISEASES)
(ANTIBIOTICS)

ZIL'BERMAN, Z.I.

Critical thrombopenia following the administration of butadione. Vrach.delo no.2:131-132 F '63. (MIRA 16:5)

1. Klinika fakul'tetskoy terapii (zav. - prof. N.B. Shchupak) Chernovitskogo meditsinskogo instituta i vtoroye terapevticheskoye otdeleniye Chernovitskoy oblastnoy klinicheskoy bol'nitsy.

(BUTADIONE) (RHEUMATIC FEVER) (BLOOD PLATELETS)

ZILBERMAN, Z.P.

798. VISUAL FIELD CHANGES IN PATIENTS WITH MULTIPLE SCLEROSIS (Russian text) - Zilberman Z. P. - ZH. OFTALM. 1956, 5 (283-286)

Of 103 patients with the diagnosis of multiple sclerosis who were under observation, 31 showed changes in the visual field to white light (object measuring 3 mm.). Relative central scotoma was present in 10, concentric constriction of the visual field in 17, tubular in 1, right or left quadrantic homonymous hemianopia in 2, and loss of the lower half of the visual field in 1. Visual fields to colours (objects 1-2 mm.) were tested in 54 patients; changes were found in 46. The numbers of patients who could not distinguish various colours were as follows: blue: 6, green: 2, green and blue: 7, red: 1, all colours: 8, inversion to blue colour: 18 and absolute central scotoma to colours: 4. The author notes that impairment of visual fields is an important factor in the sum total of signs giving evidence of involvement (and even the degree of involvement) of the neuro-visual apparatus in multiple sclerosis. Testing of the visual fields for colour permits demonstration of minimal deviations in the function of the neuro-visual apparatus in multiple sclerosis, in some cases this is the only pathological manifestation in the optic nerve.

(S)

ZIL'BERMAN, Z. P.

Shambrayevskiy, S. M., and Zil'berman, Z. P. - "Experience in using UVCH streams in treating eye infections", Uchen. zapiski (Ukr. nauch.-issled. in-t oftalmologii im. prof. Girshmana), Vol. V, 1948, p. 59-62.

SO: U-3042, 11 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 8, 1949).

ZIL'BERMAN, Z.P.

AL'PERN, D.Ye., professor; MERKULOV, I.I., professor; ZIL'BERMAN, Z.P., kandidat meditsinskikh nauk; LIPSHITS, R.U., kandidat meditsinskikh nauk

Therapeutic effect of adenylic compounds on some types of inflammation of the eye. Oft.zhur. 12 no.2:67-71 '57. (MIRA 10:11)

1. Chlen-korrespondent AN USSR (for Al'pern). 2. Chlen-korrespondent AMN SSSR (for Merkulov). 3. Iz ukrainskogo nauchno-issledovatel'skogo instituta glaznykh bolezney imeni prof. Girshmana (dir. - chlen-korrespondent AMN SSSR prof. I.I.Merkulov) i iz kafedry patologicheskoy fiziologii Khar'kovskogo meditsinskogo instituta (zav. kafedroy - chlen-korrespondent AM USSR prof. D.Ye. Al'pern)
(ADENYLIC ACID) (EYE--INFLAMMATION)

ZIL'BERMAN, Z.P., kand.med.nauk

Pupils in nonsuppurative inflammatory diseases of the central nervous system. Vop.neirooft. 7:185-191 '61.
(MIRA 14:9)

(PUPIL (EYE)) (NERVOUS SYSTEM—DISEASES)

ZIL'BERMAN-GRANOVSKAYA, A. A.

Laboratory of Thermodynamics, Scientific Research Institute of Chemistry, Moscow State University, (-1940-)

"The Measurement of Small Vapor Pressures." I. "The Pressure of the Vapors of Naphthalene, Campher and Glycerin."

Zhur. Fiz. Khim., Vol. 14, No. 5-6, 1940.

ZIL'BERMAN-GRANOVSKAYA, A. A.

Laboratory of Chemical Thermodynamics, Scientific-Research Institute of Chemistry, (-1940-)

"The Measurement of Small Vapor Pressures." II. "The Vapor Pressures of Cis and Trans Isomers."

Zhur. Fiz. Khim., Vol. 14, No. 5-6, 1940.

ZIL'BERMAN-GRANOVSKAYA, A. A.; SHURAH, Ye. A.

Laboratory of Chemical Thermodynamics, Science Research Unit of Chemistry, Moscow State University, (-1940-)

"The Measurement of Small Vapor Pressures" Part III, "The Measurement of the Vapor Pressure of Halogen-Substitute Benzene."

Zhur. Fiz. Khim., Vol. 14, No. 7, 1940.

ZIL'BERMINA, V. A., jt. au.

On the uniformity of the determination of mechanical properties of sedimentary rocks, on the new methods of mechanical analysis and on the classification of fractions Moskva, Izd. Nauch. tekhn. otdela V.S.N.KH., 1926. 43 p.

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1. Rocks, Sedimentary. I. Zil'berminz, V. A, jt. au. II. Ikenov, M. V., jt. au.

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AUTHORS: Razuvayev, G. A., Corresponding Member, AS USSR, Zil'berman, Ye. I., Svetozarskiy, S. V.

TITLE: Production of the Hexacyclic Product of Autocondensation of Cyclohexanone

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TEXT: As is known, 2-cyclohexylidenecyclohexanone is formed on storing a mixture of equal amounts of cyclohexanone and 60% aqueous H_2SO_4 (Ref 2) for 24 hours. The authors wanted to investigate the behavior of cyclohexanone in the presence of a more concentrated H_2SO_4. In their paper, they proved that a solid product with the empirical formula $C_{36}H_{52}O_2$ (Table 1) is formed by the reaction of cyclohexanone with methanolic H_2SO_4 (I). Furthermore, it was found that in the presence of methanol, n-butanol, or water and concentrated H_2SO_4 (Experiments 1, 2 and 3) always the same condensation product of cyclohexanone $C_{36}H_{52}O_2$ is formed. If the solvent does not participate in its formation, the mentioned product is a result of autocondensation of cyclohexanone. $C_{36}H_{52}O_2$ was also obtained in a low yield (1%) in the autocondensation of cyclohexanone into dodecahydro-1,2,3,4,5,6,7,8,9,10,11,12-triphenylene (Ref 3) (Experiment 4). Furthermore,

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it was found that 2-cyclohexylidenecyclohexanone is also transformed into $C_{36}H_{52}O_2$ (Experiment 6) in the presence of methanolic H_2SO_4. In the synthesis of 2-cyclohexylidenecyclohexanone, also (I) is formed besides the final product if the experiment is carried out for a longer period. On the other hand, some tricyclic autocondensation products of cyclohexanone do not produce substance (I) in the reaction with methanolic H_2SO_4. For this reason, the authors assume that the autocondensation of cyclohexanone into (I) passes the stage of formation of 2-cyclohexylidenecyclohexanone (1), (2). In experiments 1-3 and 6, dodecahydrotriphenylene was obtained as a by-product. In experiment 6, this may be explained by the reaction of a reversible aldol condensation (Refs 4-6). On heating with dilute aqueous acid and alkaline solutions until the boiling point is attained, product (I) is not hydrolyzed at atmospheric pressure. By boiling with concentrated HNO_3 (I) is oxidized to give adipinic acid. On heating to 250°, a water molecule is cleft off from (I), and $C_{36}H_{50}O$ is formed. Under ordinary conditions, in the presence of platinum oxide, (I) adds no hydrogen on catalytic hydrogenation, and the usual derivatives of carbonyl compounds are not obtained. (I) cannot contain any tertiary alcohol groups. Figure 1 shows

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